

**CLAIMS:**

1. A photolithographic process comprising the steps of:
  - applying a photoresist layer (2), with a substantially uniform thickness, on a substrate (1),
  - locally exposing the photoresist layer (2) to a radiation source with a suitable wavelength,
  - providing a suitable liquid developer composition on the substrate (1),
  - dissolving an exposed or unexposed region of the photoresist layer (2) with the developer composition,
  - rinsing and drying the photoresist layer (2) thereby interrupting said dissolving step,wherein the substrate (1) has a metallic surface (1c) in contact with the photoresist layer (2) and the photoresist layer (2) has a thickness  $dr < 100\text{nm}$ .
2. A photolithographic process a claimed in claim 1, wherein the substrate comprises a metallic surface layer (1b), with a thickness  $dm$  larger than approximately  $10\text{nm}$ , and a further substrate material (1a).
3. A photolithographic process a claimed in claim 1 or 2, wherein the metallic surface (1c) comprises the chemical elements Ni, Cr or Au.
4. A photolithographic process as claimed in any one of claims 1 - 3, wherein the photoresist (2) is a positive novolac resin-based photoresist.
5. A photolithographic process a claimed in any one of claims 1 - 4, where in the substrate (1a, 1b) is a master substrate for the production of a high density optical medium.
6. A stamper (3) for the production of optical data storage media, manufactured by using the master substrate as used in claim 5.

7. Use of a stamper (3) as claimed in claim 6 for the manufacture of a high density optical data storage medium.
8. An optical data storage medium produced in an injection molding process by  
5 using the stamper (3) of claim 6.